Social Categories as Markers of Intrinsic Interpersonal Obligations

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Abstract
Social categorization is an early-developing feature of human social cognition, yet the role that social categories play in children's understanding of and predictions about human behavior has been unclear. In the studies reported here, we tested whether a foundational functional role of social categories is to mark people as intrinsically obligated to one another (e.g., obligated to protect rather than harm). In three studies, children (aged 3–9, $N = 124$) viewed only within-category harm as violating intrinsic obligations; in contrast, they viewed between-category harm as violating extrinsic obligations defined by explicit rules. These data indicate that children view social categories as marking patterns of intrinsic interpersonal obligations, suggesting that a key function of social categories is to support inferences about how people will relate to members of their own and other groups.

From early infancy, children have countless experiences with human behavior and human variation. Classifying people into categories (e.g., girls or French speakers) is a crucial way of organizing these experiences. Children form categories based on familiar social criteria (e.g., gender, race, and language) within the 1st year of life (Bar-Haim, Ziv, Lamy, & Hodes, 2006; Kinzler, Dopoux, & Spelke, 2007; Quinn, Yahr, Kuhn, Slater, & Pascalis, 2002) and form categories based on a wide range of flexible criteria in early childhood (Bigler & Liben, 2007; Dunham, Baron, & Carey, 2011; Patterson & Bigler, 2006).

What role do these social categories play in children's understanding of and predictions about their environment? One perspective is that children hold an intuitive theory that social categories—much like animal categories—mark individuals who are fundamentally similar to each other (Hirschfeld, 1996). On this account, this intuitive theory facilitates the extension of information about one category member (e.g., information that one girl likes a particular game) to other members of the category (e.g., a prediction that other girls will like it, too; Diesendruck & HaLevi, 2006). Indeed, young children use some social categories, especially gender categories, to make these kinds of predictions about individuals' behavioral and psychological

characteristics (Gelman, Collman, & Maccoby, 1986; Waxman, 2010). Thus, an intuitive theory that social categories mark fundamental similarities supports a powerful mechanism for using social categories to predict human behavior.

Yet there are several reasons to suspect that this account does not capture the full functional role that social categories play in early social cognition. First, by preschool, children can categorize people in many ways (e.g., by gender, race, language, teams, and shirt colors) and are sensitive to many of these categorical distinctions in their feelings and behaviors toward their own group members (Bigler & Liben, 2007; Dunham et al., 2011; Maccoby & Jacklin, 1987); however, children use only a small subset of categories to make the types of inferences just described. For example, although preschool-age children can categorize people on the basis of race and show race-based social preferences when tested in experimental contexts (Aboud, 1988; Baron & Banaji, 2006; Dunham,

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Baron, & Banaji, 2008), they often do not view race as marking people who are fundamentally similar to each other (Kinzler & Dautel, 2012; Rhodes & Gelman, 2009) or use race to predict individuals' psychological or behavioral characteristics (Rhodes, 2012; Shutts, Pemberton Roben, & Spelke, 2013). Similarly, preschool-age children can learn novel social categories based on shirt colors and labels and demonstrate sensitivity to these categories in their feelings and behaviors (Dunham et al., 2011; Patterson & Bigler, 2006), but they do not use such categories to predict psychological properties (e.g., they do not expect members of groups based on these categories to share preferences for the same games; Kalish, 2012). Thus, many categories to which children are sensitive do not appear to invoke a naive theory that social categories mark fundamental similarities.

Second, the view that social categories mark fundamental similarities does not provide a framework for understanding some of the uniquely social functions that categories of people might serve. For example, in everyday life, social categories may serve to predict patterns of social relationships and social interactions—who will be friends and who will be enemies, who will cooperate and who will compete, or who will help and who will harm each other. Using social categories to make these types of inferences would rely not on assumptions that category members are fundamentally similar to each other but, instead, on beliefs about how category memberships constrain the ways in which people relate to one another. Thus, social categories could be used to predict patterns of social structure (how members of a group relate to one another and to members of other groups), but not necessarily the individual characteristics of specific group members. Consistent with this possibility, children use race-based categories to predict social relationships (e.g., who will be friends with whom) at a younger age than they use such categories to predict individual characteristics (e.g., who will share preferences with whom; Shutts et al., 2013). In addition, although children do not expect novel categories based on clothing or labels to indicate shared psychological properties (Kalish, 2012; Kalish & Lawson, 2008), children aged 3 and older will use such categories to predict patterns of specific social interactions. In particular, children use such categories to predict harmful interactions, expecting agents to harm (e.g., hit or tease) members of contrasting categories instead of members of their own categories (Rhodes, 2012).

Children's use of social categories to predict social interactions and social relationships does not follow from an intuitive theory that social categories mark individuals who are fundamentally similar to each other. Yet the nature of the intuitive theory that could underlie such inferences remains unknown. Without specifying this

intuitive theory, we can neither predict the types of inferences that social categories will support nor identify the implications of these inferences for social cognition more generally. Given that social categorization is an early-emerging and robust component of social cognition with multiple cognitive and behavioral consequences, identifying the nature of the intuitive theory that shapes the acquisition and use of such categories is a critical challenge for research on the development of social cognition.

In the present studies, we tested the proposal that children have a second intuitive theory of social categories—in particular, an intuitive theory that social categories mark people who hold intrinsic interpersonal obligations to one another. On this account, children have systematic, abstract expectations that people are intrinsically obligated to support and protect, and not to harm, members of their own groups, and the inferences described earlier (Rhodes, 2012; Shutts et al., 2013) reflect expectations that people will behave in line with these obligations (Kalish & Shiverick, 2004). This intuitive theory would facilitate inferences about how people will relate to one another and thus provides another powerful way in which social categories could be used to predict human action.

We directly tested whether young children view categories as marking people who are intrinsically obligated to each other. To do so, we built on methods from previous work on moral development (Smetana, 1981; Turiel, 1983), which tested beliefs regarding intrinsic obligations by examining judgments about whether the wrongness of violations of obligations depends on the presence of explicit rules. Using this method, when children maintain that an action (e.g., hitting someone) is wrong, even if there are no rules in the agent's environment prohibiting the action (e.g., no rules against hitting), it suggests that they view the action as violating an intrinsic obligation—an obligation that exists regardless of the external environment. In contrast, if children view the wrongness of an action as dependent on rules, this indicates that they view the action as violating an obligation that exists only in the context of explicit social agreements. Thus, by applying this method in our studies, we tested whether children view people as intrinsically obligated not to harm members of their own category, but as prohibited from harming members of other categories only in the presence of explicit social rules.

Study 1

Participants

Participants included 23 preschool-age children (14 males, 9 females; mean age = 4.5 years, range = 4.0–4.9 years;

39% Caucasian, 4% African American, 22% Asian American, 22% Hispanic, 4% multiethnic, 8% unknown) recruited from and tested at the Children's Museum of Manhattan. An additional 8 children were tested but excluded from analyses (4 for disruptions during the testing session and 4 for failing to meet inclusion criteria).

Procedure

Participants were introduced to two novel categories through a brief story. Novel categories were used to test whether children have abstract beliefs about how categories mark obligations, which are observable as children make sense of new social divisions and are not dependent on knowledge of specific group customs or histories. Using novel groups also allowed us to examine responses to groups of which children themselves were not members and, thus, to examine children's abstract beliefs without involving generalized biases in favor of in-group members.

The story introduced two categories—the Flurps and the Zazzes—that were marked by shirt color (red and blue, respectively). To ensure that children treated the novel categories as meaningful, the groups were described as engaging in within-group cooperation. An activity was briefly described in which the members of each group worked together to build a block tower (scripts and images were drawn from Study 1 of Rhodes, 2012). The activities were not competitive, and no interactions between members of the different groups were described.

Next, children were told about a harmful interaction that took place between two individuals on a playground. (The identity of the actor in the interaction—a Zaz or a Flurp—was counterbalanced across participants; for ease of presentation, only questions about scenarios in which a Zaz was the actor are provided here.) Children heard a scenario in which a perpetrator harmed a member of his or her own category (within-group harm: "One day, a Zaz teased another Zaz and hurt his feelings") and a scenario in which a perpetrator harmed a member of the other category (between-group harm: "One day, a Zaz teased a Flurp and hurt his feelings") in counterbalanced order. One of these scenarios involved teasing, and the other involved social exclusion, with assignment of the scenario (teasing vs. exclusion) to harm context (within-group harm vs. between-group harm) counterbalanced across participants. There were no effects of scenario type, so we collapsed data across this factor to focus on the comparison of within-group and between-group harm.

To measure whether the children viewed the harmful action as violating intrinsic obligations, we asked them a series of questions. Immediately after the event was described, children were asked, "Was what the Zaz did OK or not OK?" If they answered that it was not OK, they were asked, "Was it a little bad, pretty bad, or very, very bad?" (scoring: 0 = *OK*, 1 = *a little bad*, 2 = *pretty bad*, 3 = *very, very bad*). Then, we provided information about the characters' environment: "What if there was no rule in their school against teasing? Let's pretend that in the school they go to, the teachers said that the kids could tease each other." For the within-group-harm scenario, children were then asked, "Then would it be OK or not OK for the Zaz to tease another Zaz and hurt his feelings?" For the between-group-harm scenario, they were asked, "Then would it be OK or not OK for the Zaz to tease a Flurp and hurt his feelings?" If children answered either question by saying that it would not be OK, they were asked, "Would it be a little bad, pretty bad, or very, very bad?"

If children view people as intrinsically obligated only to their own category members, they should maintain that it is wrong for a perpetrator to harm a member of his or her own group regardless of explicit rules (thus, ratings of wrongness should be the same before and after children received rule information), but they should view the wrongness of harming a member of the other group as contingent on explicit rules. Because this study was designed to examine beliefs about the wrongness of harmful actions—whether wrongness stems from intrinsic or extrinsic causes—children were included only if they initially identified the harmful action as unacceptable (4 children were excluded for initially identifying the Zaz's action as OK). Following previous developmental work, we asked children to explain their evaluations (for more details, see Table S1 in the Supplemental Material available online).

Results and discussion

Children's evaluations were analyzed through a 2 (harm context: within-group harm vs. between-group harm) × 2 (rule information: before vs. after) repeated measures analysis of variance (ANOVA), with both factors as within-subjects variables. Children gave harsher ratings before ($M = 2.30$, $SE = 0.17$) than after ($M = 1.70$, $SE = 0.22$) receiving the rule information, $F(1, 22) = 5.69$, $p = .03$, $\eta_p^2 = .20$. As predicted, however, they did so for only between-group harm; ratings of between-group harm became less negative following the rule information, $p = .001$, $d = 0.92$, whereas ratings of within-group harm did not change, $p > .50$ (see Fig. 1). The Harm Context × Rule Information interaction was reliable, $F(1, 22) = 7.06$, $p = .01$, $\eta_p^2 = .24$. Thus, 4-year-olds treated only within-group harm as violating intrinsic obligations.
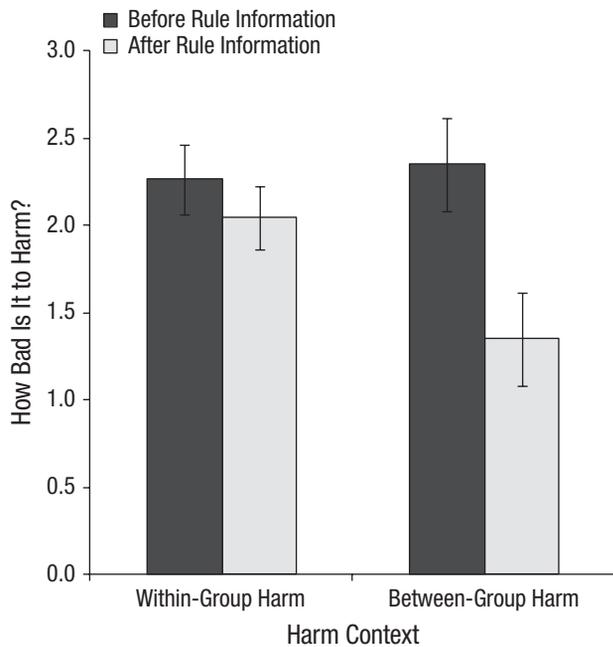
Fig. 1. Results from Study 1: 4-year-olds' evaluations of harm as a function of harm context and receipt of rule information. Responses were scored from 0 (*OK*) to 3 (*very, very bad*). Error bars represent ±1 *SEM*.

Study 2

The purpose of Study 2 was to rule out the possibility that children consider categories as marking intrinsic obligations only in contexts that might be conducive to between-group competition. Although no competition was described in Study 1, the groups were referred to as *teams*, which could have led children to infer the presence of a contest.

Participants

Participants were 63 children recruited from and tested at private preschools (38 male, 25 female; mean age = 4.63 years, range = 3.55–5.98 years; 35% multiethnic, 40% Asian American, 25% unknown). Because the age range of Study 2 was larger than that of Study 1, spanning the entire preschool period, we divided children into two age groups for analyses to test whether a similar pattern held across this period: younger preschoolers (*N* = 33, mean age = 4.14 years, range = 3.55–4.50 years) and older preschoolers (*N* = 30, mean age = 5.15 years, range = 4.60–5.98 years).

Procedure

To provide a thorough test of whether children have a robust expectation that groups mark intrinsic obligations

even in the absence of between-group competition, we included two conditions in Study 2. The first condition, the cooperation condition, replicated that used in Study 1 except that the groups were referred to simply as *groups* instead of *teams*.

We used the second condition, the language condition, to examine whether the pattern found in Study 1 would hold across another group context, one in which children were likely to view the groups as meaningful on the basis of their prior knowledge (Kinzler, Shutts, DeJesus, & Spelke, 2009) but in which no within-group cooperation was described. Children were shown four characters from each group and told, "Here are the Flurps! Here are the Zazzes! I want to show you what they sound like. Let's listen to some things they say." The experimenter pointed to two members of each group individually and played an audio recording of a child speaking for each (Kinzler et al., 2009). The members of one of the groups spoke French, whereas the members of the other group spoke English. The content of the audio recording was neutral and identical across languages (e.g., "Hide-and-seek is a fun game to play").

After the introduction to the novel groups, children were asked the test questions used in Study 1 about four separate scenarios (two within-group-harm scenarios and two between-group-harm scenarios). One harmful action in each context involved teasing, as in Study 1, and the other involved denying someone access to resources (e.g., "The Flurp took all of the crackers for himself and wouldn't share them with the Zaz. The Zaz didn't have any crackers and was sad."), with order of harm context counterbalanced across participants. There were no effects of scenario type, so we collapsed across this factor to focus on comparisons of within-group and between-group harm.

Results and discussion

We conducted a 2 (age group: older preschoolers vs. younger preschoolers) × 2 (harm context: between-group harm vs. within-group harm) × 2 (rule information: before vs. after) × 2 (condition: cooperation vs. language) repeated measures ANOVA, with harm context and rule information as within-subjects factors. Children rated the actions more negatively before (*M* = 2.25, *SE* = 0.07) than after (*M* = 1.87, *SE* = 0.13) receiving the rule information, $F(1, 59) = 10.23$, $p = .002$, $\eta_p^2 = .15$. As in Study 1, however, they did so for only between-group harm (before: *M* = 2.23, *SE* = 0.09; after: *M* = 1.77, *SE* = 0.14), $p < .001$, $d = 0.56$. Ratings for within-group harm did not change (before: *M* = 2.20, *SE* = 0.09; after: *M* = 1.97, *SE* = 0.14), $p > .30$. The Harm Context × Rule Information interaction was reliable, $F(1, 59) = 4.22$, $p = .04$, $\eta_p^2 = .07$, and there were no main or interactive effects of age group or

condition. Inspection of the means confirmed that identical patterns were found across both age groups and conditions. Thus, Study 2 confirmed that preschool-age children have a robust expectation that only within-group harm violates intrinsic obligations, even in the absence of between-group competition and across multiple ways of defining social categories.

Study 3

The aim of Study 3 was to examine whether the obtained pattern held across a later period of childhood. Kalish and Lawson (2008; also Kalish, 2012) suggested that obligations are particularly central to younger children's understanding of social categories. Thus, one possibility is that the effects documented in Studies 1 and 2 were specific to the period of early childhood. Yet another possibility is that the intuitive theory that social categories mark intrinsic obligations continues to shape children's understanding of social categories across childhood. Thus, in Study 3, we tested whether older children viewed categories as marking patterns of intrinsic interpersonal obligations.

Participants and procedure

Participants were 38 children aged 7 to 9 years (19 female, 19 male; mean age = 8.5 years, range = 7.2–9.8 years; 67% Caucasian, 3% Asian, 7% Hispanic, 23% unknown) recruited from and tested at a public elementary school in New York City (2 additional children were tested but excluded for failing to meet the inclusion criteria used in Study 1). Because of time constraints on the research sessions, children completed only one set of items each. Participants were introduced to the novel categories as in Study 1 and then were assigned randomly to hear about a scenario involving either within-group harm or between-group harm (the teasing scenarios used in Studies 1 and 2).

Results and discussion

Children rated the action as worse before ($M = 2.10$, $SE = 0.14$) than after ($M = 1.37$, $SE = 0.21$) receiving the rule information, $F(1, 36) = 11.40$, $p = .002$, $\eta_p^2 = .24$, and rated within-group harm ($M = 2.03$, $SE = 0.19$) as worse than between-group harm ($M = 1.44$, $SE = 0.20$), $F(1, 36) = 4.48$, $p = .04$, $\eta_p^2 = .11$. The interaction between rule information and group context was reliable, $F(1, 36) = 4.48$, $p = .03$, $\eta_p^2 = .12$. As shown in Figure 2, the pattern was identical to that found in previous studies: Ratings of within-group harm did not change across questions, $p > .40$, but ratings of between-group harm became less negative after children received the rule information, $p < .001$, $d = 1.20$. Thus, older children, like the younger children
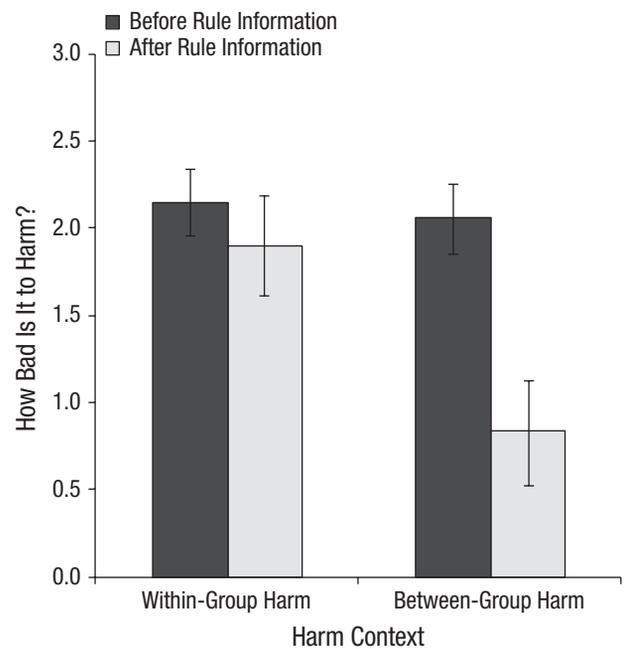
Fig. 2. Results from Study 3: 7- to 9-year-old children's evaluations of harm as a function of harm context and receipt of rule information. Responses were scored from 0 (*OK*) to 3 (*very, very bad*). Error bars represent ±1 *SEM*.

in Studies 1 and 2, treated social categories as marking people who are intrinsically obligated to one another.

General Discussion

We found that children (aged 3–9 years) view social categories as marking patterns of intrinsic interpersonal obligations; that is, they view people as intrinsically obligated only to their own group members. In three studies, children viewed within-group harm as wrong regardless of explicit rules, but they viewed the wrongness of between-group harm as contingent on the presence of such rules.

We suggest that the intuition that categories mark patterns of intrinsic obligations underlies an important functional role of social categories in social cognition by supporting predictions of obligation-relevant behaviors. Children can thus use social categories to predict elements of social structure—how people will interact with each other, what relationships they will form, and toward whom they will direct harmful behaviors. In the present studies, children demonstrated these intuitions for both completely novel and arbitrary social categories of which they themselves were not members as well as for categories based on familiar distinctions (language differences). Thus, our data suggest that abstract expectations that social categories mark patterns of intrinsic interpersonal

obligations are readily elicited and robustly relied on across different contexts.

In the present studies, we examined primarily novel groups, marked by labels and shirt colors, to test children's abstract beliefs about how categories shape obligations independent of the children's knowledge of previous group histories or their own category memberships. A critical question for future work is how these effects extend to familiar categories that children might encounter in their everyday lives, including both those categories about which they have more background knowledge and categories encompassing larger social groups in which the individual members may not be personally familiar with one another. A particularly important issue to address is whether the present findings hold for categories that are not marked by labels. Labeling highlights categories and facilitates category-based reasoning for both social (Bigler & Liben, 2007; Gelman & Heyman, 1999; Waxman, 2010) and nonsocial (for review, see Waxman, 1999) categories and plays an especially important role as children learn new categories. Thus, the present findings may indeed have depended on the labels provided for these novel categories.

Nevertheless, the present findings go far beyond the general effects of labeling. Although labels facilitate the development of categorization across domains, the types of inferences that labeled categories support vary by domain. For animal categories, for example, children treat labels as marking individuals who are similar to each other in nonobvious ways (Gelman, 2003). For novel social categories, however, labels do not support inferences that individual members are similar to each other (e.g., that category members will share nonobvious preferences or behaviors; Kalish, 2012), even after extensive, repeated exposure to such labels (Rhodes, Leslie, & Tworek, 2012). Instead, children use novel labeled social categories to evaluate how people should relate to one another, as shown in the present studies, following a fairly brief introduction to the categories. Thus, the phenomenon revealed here may have resulted from the interplay between the general effects of labeling and children's intuitive theory of how categories shape the social world.

We examined responses to hypothetical, explicit alterations of familiar moral rules. As shown by previous work on moral development (Smetana, 1981, 2006), by age 3, children generally view actions that cause harm (e.g., teasing) as wrong and prohibited. The use of hypothetical situations was necessary to prevent children from developing the belief that these harmful behaviors are actually permissible in certain contexts. Yet this approach raises important questions regarding whether the present findings generalize to events that are more realistic. The instructions used phrasing that signaled the hypothetical nature of the rule change (e.g., "let's pretend. . ." and "what if. . .") and were held constant across scenarios describing within-group and between-group harm, and thus cannot account for why children's evaluations of harm were more lenient only for a subset of items (i.e., only for between-group harm). In addition, children often reason quite similarly about hypothetical harmful transgressions and transgressions that they actually view in their environment (Turiel, 2008). Still, the generalizability of findings using hypothetical terms is an important issue to address in future work

Our key aim in this research was to examine the role of obligations in representations of social categories. Yet because we examined how children evaluate harmful actions, the data also may have implications for the development of moral judgment. In previous work on moral development, viewing a transgression as wrong regardless of external rules has been taken as a hallmark of moral judgment, whereas viewing the wrongness of a transgression as contingent on rules has been taken to indicate nonmoral, conventional reasoning (Smetana, 1981; Turiel, 1983). Applying this distinction to the present context would thus indicate that children view within-group harm as a moral transgression but view between-group harm as breaking only conventional rules. In this manner, social groups may operate to define moral boundaries, a notion consistent with some anthropological, social psychological, cognitive neuroscience, and philosophical theories (Cohen, Montoya, & Insko, 2006; Greene, 2003; Haidt, 2008; Meier & Hinsz, 2004; Rai & Fiske, 2011; Shweder, Mahapatra, & Miller, 1990).

The present findings show that children treat social categories as marking whether an individual is bound not only to specific conventional norms (e.g., regarding foods or dress; Kalish, 2012; Kalish & Lawson, 2008) but also to one of the most fundamental moral obligations—the obligation not to harm. These findings, together with prior work, indicate that children hold a powerful intuitive theory that social categories mark how people ought to behave. We propose that this intuition forms the bases of naive sociology—children's abstract expectations about the structure of the social world—and thus contributes to and guides the acquisition of social knowledge.

Declaration of Conflicting Interests

Supplemental Material

Additional supporting information may be found at http://pss .sagepub.com/content/by/supplemental-data

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